

Heteromurus (Verhoeffiella) dallaii sp. n.
a new cave-dwelling springtail
(Collembola: Entomobryidae)

par

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With 1 figure

ABSTRACT

The new species from a cave in the Venetian Prealps is described and figured. An identification key is proposed for the European *Verhoeffiella* species.

***Heteromurus (Verhoeffiella) dallaii* sp. n.**

Type locality: Venetian Prealps. Grotta della Fous.

Type material: Holotype ♂ mounted in Swan's medium. Venetian Prealps, Grotta della Fous, (229 FR) 1979 Camatta leg. In coll. Muséum d'Histoire naturelle of Genève. — Allotype with some paratypes from the same locality kept in coll. Museo Civico di Storia Naturale of Venice and 4 paratypes in the Muséum d'Histoire naturelle of Genève.

Diagnosis: Closely related to *Heteromurus (Verhoeffiella) cavicola* Absolon, 1900, *Heteromurus (Verhoeffiella) absoloni* Kseneman, 1937 or *Heteromurus (Verhoeffiella) hispanicus* Bonet, 1931 respectively. It differs from *Verhoeffiella cavicola* in ratios unguis (claw): unguiculus (empodial appendage), manubrium: dens + mucro, Abd. III: Abd. IV, and in form of empodial appendage [*V. cavicola*: Unguis: unguiculus as 62: 36 (empodial index 1.6), manubrium: dens + mucro as 32: 66 (manubrial index 0.5), Abd. IV nearly two times longer than Abd. III, empodial appendage is bristle-like prolonged]. *Verhoeffiella hispanica* seems to be much more related to the new species but differs from it in absence of inner tooth of claw, and in presence of distinct external tooth on empodial appendage, as well as in ratio Abd. III: Abd. IV [*V. hispanica*: Unguis: unguicu-

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lus as 42: 32 (empodial index 1.3), manubrial index 0.6, Abd. III: Abd. IV as 1: 1.5]. *Verhoeffiella absoloni* is characterized by large proximal teeth and large inner tooth of claw.

Derivatio nominis: Named in honour of Prof. Dr. Romano Dallai, Università di Siena who contributed extensively to the taxonomy and morphology of Collembola and Protura.

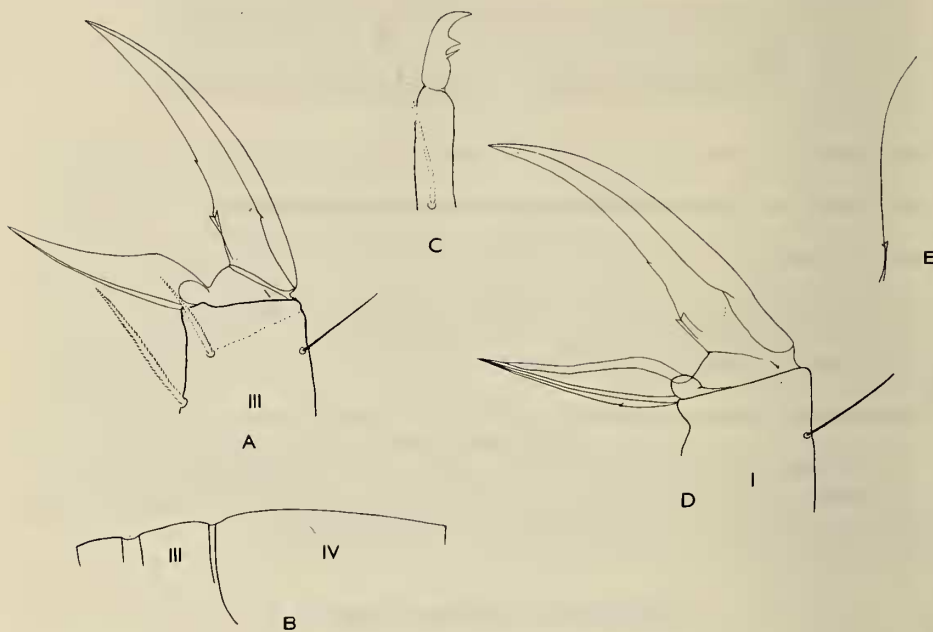


FIG. 1.

Heteromurus (Verhoeffiella) dallai sp. n.: A. The apical part of third leg. — B. The ratio of abdominal segments III and IV. — C. Mucro. — D. The apical part of first leg. — E. The inner side of claw in another specimen.

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DESCRIPTION

Length of body measured without furcula and antennae 2.5-3.0 mm. Body colour white or yellow-white respectively.

Head: Eyes absent. Antennae long but not longer than body. The last antennal segments (Ant. IV + Ant. V) ring-like. The ratio of antennal segments I: II: III: IV: V as 7: 20: 30: 38: 83. Antennae 2.5 times longer than the diagonal of head.

Thorax: Claw (unguis) with two proximal teeth, one median tooth, and two small lateral ones. The ratio unguis: unguiculus as 85: 63 (empodial index 1.3-1.4). Empodial appendage with fine external tooth (Figs A, D).

Abdomen: The ratio of abdominal segments III: IV as follows 1: 2.8-3.0 (Fig. B). The ratio manubrium: dens + mucro as 39: 55 (manubrial index 0.7). Mucro with well developed apical tooth (Fig. C). Rami tenaculi quadridentate.

Taxonomic remark:

1. Comparative table of *Heteromurus (Verhoeffiella)* species

Subgenus <i>Verhoeffiella</i>	Index U: u	Index M: D+m	Antennae shorter than body	longer
<i>longicornis</i>	1.7	0.7-0.8	-	+
<i>cavicola</i>	1.6	0.5	+	-
<i>hispanica</i>	1.3	0.6	+	-
<i>absoloni</i>	-	-	+	-
<i>dallaii</i>	1.3-1.4	0.7	+	-

Index U: u = Unguis: unguiculus. Index M: D + m = Manubrium: dens + mucro, so called manubrial index.

KEY FOR DETERMINATION OF EUROPEAN *Verhoeffiella* SPECIES

The last antennal segments IV + V ring-like, eyes absent. Cave-dwelling.

1. Claw without teeth. Antennal segments IV + V longer than body
 *V. longicornis* Absolon, 1900
- Claw with inner tooth. Antennal segments IV + V shorter than body 2
2. The inner tooth in the basal half of claw, proximal teeth are small, empodial appendage bristle-like prolonged
 *V. cavicola* Absolon, 1900
- Empodial appendage in the first third broadened, no bristle-like prolonged 3
3. The inner tooth and the proximal teeth are large. The inner tooth is situated in the middle of ventral side of claw
 *V. absoloni* Kseneman, 1937
- The inner tooth is fine or missing, if present, situated in the basal half of claw, the proximal teeth are small
 *V. dallaii* sp. n.
4. Empodial appendage with distinct external tooth, the inner tooth missing
 *V. hispanica* Bonet, 1931

V a r i a b i l i t y. Absence of inner tooth and shorter empodial appendage were observed in smaller specimens (Fig. E).

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